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ABSTRACT

Developments in higher education that have significance for the next few years (1987-1989) are discussed, based on a review of the published research in Western Europe and the Americas. Three propositions derived from the currents of research on higher education are briefly considered: (1) a demanding force for higher education comes from application and technology rather than from developed bodies of theory; (2) a major shift in the pattern of knowledge is occurring with consequences for academic organization, the curriculum, and the conduct of research; and (3) public policy enactments at the national and regional levels have become a major influence on higher education, often without information from academic leaders and researchers. Evidence to support these propositions is cited, with attention to 10 areas of concern: teaching and learning, policy and planning, internal management, higher education and work, lifelong learning and nontraditional forms, adaptation to scarce resources and changing conditions, improvement of statistical information, international academic exchange, the role and participation of women, and problems of research. In addition to considering trends in higher education, "targets" of research are distinguished. A 152-item bibliography is included. (SW)

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TARGETS AND TRENDS:
RESEARCH ON HIGHER EDUCATION

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Targets and Trends:

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William Toombs, Ph. D.

A - INTRODUCTION

The purpose of this paper and the sessions that follow is to extract from the published research experience of the past few years those topics which will have significance during the next several years.

The place of this document in the process is symbolized by JANUS, the Etruscan deity adopted by the Romans as the god of gates and doorways. You may recall that no special wisdom was ascribed to Janus even though he could look in both directions. He was invoked only to insure that events were begun and carried forward in a productive manner. Thus it will be your discussions over the next two days that infuse these opening remarks with wisdom.

To review any area of scholarly work in Western Europe and the Americas is a formidable challenge. In higher education it would be impossible and even unthinkable without the orderly developments of the past ten years, developments to which many of you have contributed. Indexing and retrieval shows advances even since the 1982 meeting at Salamanca. The work of CEPES has brought order to bibliographic materials, stimulated a wider range of publication, and sponsored productive conferences on several special topics. When this endeavor is seen in the larger context of work by other bodies such as the International Association of Universities, CRE, and OECD it holds special power. Noticeable too is the willingness of more scholars with a special interest in higher education to publish analytical material. Often this includes not only the results of empirical studies but also useful descriptive analyses. Within this rich record of research I call special atten-

tion to the fundamental work by Altbach with its essay from the pen of Jan Kluczynski and full bibliography entitled Higher Education in International Perspective (1). Even with this excellent system of cross reference brevity has compelled the omission of citations from the CEPES Quarterly with which you are already familiar and time has not allowed me to cross the lines of language.

By scanning this body of material and integrating the more prominent themes it is possible to present three overarching propositions for discussion. Although severely simplified they are derived from the currents of research on higher education. Critically evaluated and expanded they may point to directions for inquiry over the next three years. The common feature to all three propositions is that they assign the greatest influence to factors outside of the academy.

First these propositions are stated in the briefest terms. Second, we take note of the evidence to support them as it is found in the ten selected areas on the agenda of necessity that evidence will be partial and indicative rather than complete and definitive. It is intended that you amend, expand, and correct these positions.

B - THREE PROPOSITIONS

Proposition 1: A driving and demanding force for higher education now comes from application and technology rather than from developed bodies of theory. The microprocessor and super-computer, satellite TV linkage and video cassettes, data banks and telecommunication networks, these are educational artifacts of enormous power. Even while they are being brought into use research is urgently needed not only to create effective delivery systems but also to "evaluate our experience", in Niblett's words (112), by imparting meaning and generating interpretations that have theoretical power. The

social impact of technology is not an unfamiliar topic. For higher education however it is the speed and scope with which practice and application are flooding into the academic world. This challenge, to interpret, conceptualize, and organize, in short, to theorize about events even as they happen is typical of the social sciences. It is in contrast to the natural sciences where the corpus of theoretical knowledge precedes and generates technology. There are some who see in this a deeper crisis, a crisis of belief and authenticity (112). Until we have tried by research to establish theory post facto that drastic judgement seems premature.

Proposition 2: A major shift in the pattern of knowledge is occurring with consequences for academic organization, the curriculum and the conduct of research. In an information-rich society the control of what Fritz Machlup called the "knowledge industry" is not the exclusive province of the university. For decades the structure of knowledge as it is embodied in the academic disciplines was a suitable analog to much of the external world. Training in a discipline and research within those boundaries assured entry into the practical world of production, government, and science. Even as academics debated about interdisciplinarity on their terms the practical world has insisted on a configuration of knowledge that fits better with the needs of practice. The combinations of disciplines now required are very different from those the faculty, left to itself, might have invented. Illustrations of this "pattern shift", to use Parson's term, are found in biotechnology, materials research, environmental studies, policy analysis, and communications. These are part of the "new hierarchies" in higher education according to Furth (65). Remarkably this pattern shift leaves the collegial and intellectual vitality of the disciplines undisturbed by simply moving a part of their activity into another context. The deeper message in this change is that

universities are expected by society to educate for both practical capability and the liberated mind.

Proposition 3: Public policy enactments at the national and regional levels have become a major influence on tertiary level education. They are undertaken too often without and occasionally in defiance of, information from academic leaders and researchers. Within the past six years comprehensive laws that directly affect higher education have been introduced in Australia, Britain, France, Italy, Spain, and the United States. Many have had severe consequences, so severe that revisions had to be made almost immediately. This condition must be taken as a sign of highly imperfect understanding on both sides, a situation made for research. Attempts by the academic community to bring into public consideration the facts from research and expert opinion have not been successful. A major inquiry into the relationship between higher education and political process would almost certainly produce improvement in both government and the academy.

C - THE PROFILE OF RESEARCH

The evidence to support these propositions is found in the turbulence visible in four of the interest areas on the agenda, "teaching and learning", "policy and planning", "internal management", and "higher education and work". In the other areas the developments, often substantial, are consistent with the past profile of research and follow familiar trends.

1 - Teaching and Learning: At the center of concern is the curriculum, the design of programs for study. University and non-university institutions as well are called into public question about how well the structure and content of the curriculum fits the requirements of the non-academic world. Students reflect the question in their choices for more applied fields. Government bodies raise it in the context of funding. Business corporations

are specific in their demands and sometimes even build their own educational institutions to meet them. Within the academic community there is a great deal of attention and some research on whether the outcomes of the curriculum, particularly the cognitive outcomes, fulfill the intentions of the faculty. In an historical analysis deLang (88) points out that this issue has come forward several times in the last two centuries and each time resulted in structural changes for higher education though not always for the universities.

All this has opened a great deal of interesting research. How to assess the outcomes of learning in ways that reach beyond simple testing will be a major line of research (55). The effects of equipment and facilities on the learning process is receiving more attention (84). Of special importance now is the work on cognitive processes, the theoretical side in psychology but the applied aspects in higher education (53, 68, 113, 120, 148). Research on the curriculum itself has not been popular largely because academics see the curriculum as a product of negotiation among faculty in the disciplines, not as an entity in itself. Nevertheless the literature displays some promising techniques for analysis. Sutcliffe (136) has made a fine comparison of chemistry programs in British universities and the Grandes Ecoles. Historical and idealistic comparisons of curricular designs also encourage insights on the curriculum (9, 143). A true picture of the curriculum is obtained by careful, confidential tabulations of student records which may show a very different pattern than the designers intended (66). Another way of getting to the roots of the curriculum is by discovering how the faculty members perceive and impart meaning to their work (62).

Several continuing themes for research remain strong. Studies of evaluation, instructional development, and teaching styles are generating a sound body of information (2, 5, 103, 125, 140). The measurement traditions is upheld but perhaps with more skepticism than in the past (3, 6, 115, 140).

Research on teacher preparation programs is matched by heated debate even after more than thirty years of searching for the best location for such training (16, 59, 66, 73, 80).

2 - Policy, Organization, and Planning: Without doubt the issues of policy, particularly public policy, create the greatest difficulty for research. Many interests beyond education come together in this arena and political factors make the design and conduct of research difficult. Nevertheless the issues of policy are so serious that they have opened once more the question, "What is the place of the university in the larger society?" (14, 67, 70, 78, 91, 119). Research specialists have already given considerable attention to the matter of how research can inform national or regional policy decisions (12, 34, 35, 52, 87, 102, 106, 107, 109, 142). Nevertheless, what is clear from the laws enacted since 1978 is that the whole process is not working very well (142, 12). There is some irony in the fact that during the very years research has improved in quality and quantity that work should have less influence.

Two recent efforts to influence public policy have been conspicuous for the high quality of the research but notable in their lack of success in shaping political decisions. In Britain the Leverhulme studies are distinguished by their breadth and insight (17, 64, 90, 92, 114, 122, 127). In the United States a group of special commission reports each concluded with "recommendations" that are well founded. In both cases the recommendations depend in large part on some kind of public enactments. The strategy of higher education appears to be indirect and complicated. These reports are directed at the higher education community with the hope that internal reform there will somehow generate political salience. What is missing is a direct means of bringing information and issues about higher education into public view and into the decision process of political leaders.

Research on higher education can address this situation in two ways, first by gathering more information on how decisions are made in the political setting and, second, by monitoring and evaluating the effects of public laws. In a sense this encourages public accountability for political acts. There is considerable research of this second type (12, 28, 39, 41, 64, 96, 116, 121).

Planning orientations have moved away from incremental and closed system approaches toward the strategic dimensions. The distinctive features are a much more detailed consideration of the external environment and a systematic analysis of future prospects (2, 10, 61, 100, 108, 3, 139).

Organization as a field of research is showing several effects as the result of more external demands (14, 42, 52, 65, 129). Academic organization is becoming a distinct topic for investigation separate from the management organization. External demands on the curriculum require that new academic organizations be invented to work with industry, affiliate with the professions, and serve governmental bodies. This organizational structure is showing more complexity than the three-tier design posited by Clark (32). At Penn State University while the disciplinary department structure remains intact these units are grouped in new ways to support academic programs in the School of Communications, the Biotechnology Institute, the Materials Research Center, and, perhaps, a School of Policy Studies. Research to describe and evaluate such organizational change, whether by historical analysis or comparison, is a current need.

3 - Internal Governance and Management: The process of institutional management is being driven by the expansion of information technology. The construction of management information systems for university administrators has received much technical attention and a large investment of funds. Research to evaluate this technology is in progress but even more important

are those studies of how decisions are made in the presence of large amounts of information. There is also a growing sensitivity to the "culture" in which all this occurs (23, 43, 45, 85, 104, 110).

One area that did not receive enough notice in the 1982 list was the Faculty. There has been considerable study of the structure of the profession continuing the line of analysis in the earlier work of Ladd and Lipsett, Halsey, Trow, and Williams (54, 58, 69). It is, however, the dynamic aspects of faculty replacement and preparation, faculty flow, that are coming to the fore (20, 21, 151). Rather suddenly there is a realization that the replacement of a whole generation of faculty is imminent, particularly in nations that live with the demographic consequences of World War II. The questions for research are very fundamental: Will there be enough scholars trained at the advanced level? Will the distribution of talented individuals insure the quality of higher education? How will the present tendencies of young people to move into short term training, masters degree level in applied fields like Computer Science and Business rather than Mathematics, affect the supply of faculty?

Another emerging area of research deals with the nature of academic leadership and the attributes of leaders (47, 141). This has moved beyond the traditional emphasis on rectors, presidents, and vice-chancellors to include department chairs and deans.

4 - Higher Education and Work: In 1982 the discussion centered largely on how specialized manpower needs might be anticipated and met. This is still an active area of research (22, 46, 92, 126, 131, 138). However, the framework within which this topic is considered has expanded. The question is now: What is the role of the university in national and regional economic development? Training and retraining personnel, basic and applied research, and

services of many kinds can be contributed by universities. Another question opened to research asks how far the university can go in honoring the needs of a fast-moving technological society and still guard the autonomy and intellectual freedom that gives it life (18, 24, 27, 38, 57, 63, 71, 72, 88, 93, 94, 150).

Still another question presented by economic development is that of the relationship of the university to other parts of the educational structure. It may be necessary to take a much broader perspective on the "learning community" which includes not only other education institutions but also libraries, museums, and societies in order to fully address economic development. The province of Ontario, Canada made such a comprehensive assessment about ten years ago.

5 - Lifelong Learning and Non-Traditional Forms: Learning opportunities for adults have developed in many directions and has been the subject of special conferences (123, 133). One kind of lifelong learning of interest to the universities involves activities that update the knowledge of practicing professionals in medicine, engineering, and law (17, 48).

Distance Learning has great significance for countries with a young population and common language. Latin America is engaged in extensive research and development, some under UNESCO sponsorship (25).

6 - Adaptation to Scarce Resources and Changing Conditions: The focus of research has moved over the past five years from an emphasis on "retrenchment" to a concern with "reallocation" of resources. There is a full literature on how reductions were managed, largely by modifying operations rather than by structural reductions (7, 97, 98, 99, 128, 130, 134, 152). The challenges of reallocation arise because expanding requirements for quality, state-of-the-art equipment, new facilities, new programs, will have to be met from revenues that are not expanding at an equal rate (65, 101).

7 - Improvement of Statistical Information: Considerable progress has been made on the comparability of data across national systems (37, 144). Perhaps more important for the future are studies that translate, and interpret the data to illuminate all aspects of an issue (51, 74, 82, 95, 118).

8 - International Academic Exchange: Rather fully addressed in studies of the past few years are the structural adjustments needed for cooperation across national and regional boundaries (8, 19, 60, 89, 132).

Programs of visitation and exchange of appointments are hostage to the economic situation. It is possible, however, to exchange information by carefully designed comparative studies as Clark has demonstrated by his recent work (30, 31, 32). Historical studies offer another avenue of intellectual exchange (11).

9 - The Role and Participation of Women: The directions of research on this topic are clearer than some of our other areas. Much of the contemporary emphasis was presented at the CEPES Conference in Sweden last year. There is a rich strain of analytical study that examines the professional and occupational roles of women in a changing social environment (50, 83, 86, 137). Another kind of research addresses the correction of data and interpretation of data to give proper notice to the interests of women (33, 124, 149).

10 - Problems of Research: We come now to the research component itself in that field of application, practice, and study known as higher education. Within this brief retrospective two quite different kinds of researchable topics are visible.

One group of topics follow an orderly pathway of development, elaboration, and refinement. These are the "trend" areas, familiar, consistent, marked by well-defined questions and stable methodologies. This kind of research is

reported well by periodic stocktaking studies (13, 15, 44, 114). Often the trend research is incorporated into "Centers" of the type recently funded in the United States by the Department of Education to deal with teacher education (Michigan State), testing (UCLA), postsecondary teaching and learning (Michigan), education and employment (Columbia), and management and governance (Maryland). Other equally durable topics in the trend category are instructional technology, institutional research, management of scientific research, and manpower analysis. It is these areas that hold the greatest promise for international exchange and collaboration.

The second class of topics, let us call them "targets", often come into the research arena of higher education as a result of extra-academic developments. These topics have a short half-life, perhaps three years before they begin to fade from view. They must be taken for what they are and attempts to build organizations around them are usually unsuccessful. Indifference toward them is often dangerous because of the consequences they carry for education. By way of illustration we can take the field of communications technology. This field has its own dynamics driving it on its own complex course but periodically there are innovations that should be targets for higher education specialists. Studies on the educational aspects of satellite transmission, targeted research, are now underway. In the public policy area one could cite the area of financial aid to students by means of long term loans as a topic that should have been a target for research when it first appeared, not twenty-five years later. It is in the nature of these targets that they cannot be adequately anticipated. Researchers and their sponsors need to accept both the "targets" and the "trends" as legitimate areas for inquiry.

D - A PROMISING PROSPECT

There is hardly unanimity on the larger issue as to whether those engaged in research on higher education can make progress. Hallak (77) sees the whole

field in a state of social experimentation, well short of any technological consensus and near the vacillation of primitive societies called bricolage by Levi-Strauss. Others have described the fractured and scattered nature of thought in our times, notably Geertz in Toward an Ethnography of Modern Thought. A fragment of evidence is found in a recent survey at Harvard University asking 113 faculty to identify influential books. Hardly a trace of common agreement emerged with only five books drawing as many as five nominations and 482 mentioned only once. Research must confront an academic world of confusing diversity.

Still there is reason for optimism in the case of research in higher education but it comes from the researchers rather than the field of study. Those who are doing the studies come to the field by different paths:

- scholars from the disciplines who have been enticed by the problems of higher education, generally humanists and social scientists
- faculty who moved into administration and were led into deeper consideration of the topics they met, usually chemists, engineers, biologists
- "specialists" trained at the doctoral level as higher education researchers, usually against a background of social science
- few come from education except in countries where the system of schooling is of a size that permits a comprehensive view, Canada and Australia for example.

In a climate of knowledge shifts, high-speed technology, and complex policy, where the nature of learning itself is in question this mixture of mature but varied researchers brought together around a field of inquiry is exactly what is needed.

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